

LAW OFFICES
SONOSKY, CHAMBERS, SACHSE,
ENDRESON & PERRY, LLP

1425 K STREET, N.W., SUITE 600
WASHINGTON, D.C. 20005
TEL (202) 682-0240 | FAX (202) 682-0249
WWW.SONOSKY.COM

MARVIN J. SONOSKY (1909-1997)
HARRY R. SACHSE
REID PEYTON CHAMBERS
WILLIAM R. PERRY
LLOYD BENTON MILLER
DOUGLAS B. L. ENDRESON
DONALD J. SIMON
MYRA M. MUNSON (AK)*
ANNE D. NOTO
MARY J. PAVEL
DAVID C. MIELKE
JAMES E. GLAZE
GARY F. BROWNELL (NM)*
COLIN C. HAMPSON
JAMES T. MEGGESTO

June 27, 2006

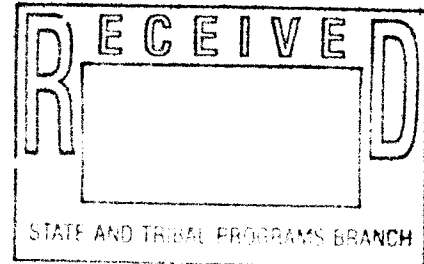
Via Federal Express

MARISSA K. FLANNERY (AK)*
MELANIE B. OSBORNE (AK)*
VANESSA L. RAY-HODGE
AARON M. SCHUTT (AK)*
WILLIAM F. STEPHENS
ADDIE C. ROLNICK
JENNIFER J. THOMAS (CA)*
KATHERINE E. MORGAN (NE)*
ALEX M. CLEGHORN (CA)*

OF COUNSEL
ARTHUR LAZARUS, JR.
ROGER W. DUBROCK (AK)*
KAY E. MAASSEN GOUWENS (AK)*
MATTHEW S. JAFFE
DOUGLAS W. WOLF
RICHARD D. MONKMAN (AK)*

*NOT ADMITTED IN D.C.

Jo Lynn Traub,
Director
Water Division (Mail Code W-15J)
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590



Re: Lac du Flambeau Band Treatment as a State

Dear Director Traub:

On behalf of the Lac du Flambeau Band of Lake Superior Chippewa Indians we enclose a letter from Dr. Marjorie Winkler and Dr. Patricia R. Sanford, of the University of Wisconsin-Madison, to the Honorable Victoria A. Doud, President of the Lac du Flambeau Band. President Doud has asked us to forward the letter so that it may be included as part of the administrative record in the above mentioned matter.

The letter responds to three written comments submitted to EPA, that criticize the September 2000 study entitled "Environmental Changes in the Last Century in Little Trout Lake, Inkspot Bay, Great Corn and Little Corn Lakes, Lac du Flambeau Tribal Lands, Wisconsin" (September 2000 Study), which was

Jo Lynn Traub
June 27, 2006
Page 2

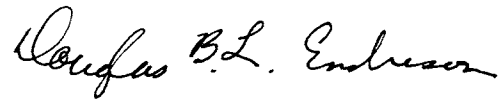
authored by Drs. Winkler and Sanford. The September 2000 Study was submitted as Attachment K.2 of the Tribe's TAS application.

Professors Winkler and Sanford respond to the following three comments:
(1) Letter to Mike Bartling, Bartlings Manitowish Cranberry Company from Teryl R. Roper, Associate Professor and Extension Horticulturist (Apr. 4, 2000);
(2) Letter to Tom Locher, Wisconsin State Cranberry Growers Association from Teryl R. Roper, Professor and Extension Horticulturist (Aug. 7, 2001); and
(3) Letter to Tom Ambs, Water Division Director from Little Trout Lake Cooperative Water Association (Feb. 14, 2006). These comments question the scientific methods used in the September 2000 study conducted by Professors Winkler and Sanford. The comments also contend that the conclusions drawn from the September 2000 study are not supported by the data contained therein.

In their letter, Professors Winkler and Sanford elaborate on the scientific methods normally used in their field, which are consistent with the scientific methods used in their September 2000 study, and further explain how the conclusions they reached were drawn from the scientific data collected. The letter is relevant to the Tribe's TAS application and provides a more complete view of the activities that impact water quality in waters within the exterior boundaries of the Reservation.

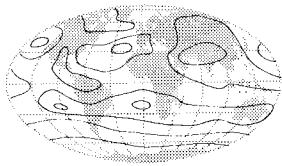
If you have any questions or if you require further information with respect to this matter please let us know.

Sincerely,



Douglas B. L. Endreson
Vanessa L. Ray-Hodge

Enclosure
cc: Ms. Barbara Wester, EPA Regional Counsel



CENTER FOR CLIMATIC RESEARCH

Institute for Environmental Studies
University of Wisconsin—Madison

1225 West Dayton Street
Madison, Wisconsin 53706-1695 USA

608-262-2839
608-262-5964 FAX

June 1, 2006

Tribal President Doud
Lac du Flambeau Band of Lake Superior Chippewa Indians
Lac du Flambeau, Wisconsin 54538

Dear Tribal President Doud:

We have reviewed the letters and other information forwarded to us by Attorney Vanessa L. Ray-Hodge concerning our September, 2000 study of Environmental Changes in the Last Century in Little Trout Lake, Inkspot Bay, Great Corn and Little Corn lakes, Lac du Flambeau Tribal Lands, Wisconsin, and the pursuit of state status for setting water quality standards by the tribe. Some of the letters from the cranberry growers and their reviewers were critical of our work and we present the following in answer to their comments.

In a letter dated 2/14/06 from the cranberry growers, p. 2, para. 1, they have wrongly interpreted conclusions from a previous study of Ike Walton and Zee lakes on the Lac du Flambeau tribal lands. Elevated mercury (Hg) levels in Ike Walton and Zee lakes are not attributed to cranberry operations around Little Trout Lake. On pp 20-21 of the Ike Walton and Zee report, dated 16 May 1996, it is stated that high Hg levels in top sediments in both lakes probably "coincide with copper smelting in northern Michigan and paper manufacturing and other industrial activities and farming practices which involve Hg compounds in the northern Midwest." The elevated Hg values like other heavy metal abundances are similar to those found in many lakes throughout the country and are distributed to lakes and wetlands by atmospheric deposition.

In p. 2, para. 2 of the same letter, the growers cite criticisms of our study by Teryl Roper, a UW-Madison Extension horticulturalist, in letters dated 4/4/00 and 8/7/01. Dr. Roper is concerned about measures of variability of the results in our studies. In paleolimnology, many investigations testing variability in data taken from multi-core studies of a single lake have concluded that a single core from the deepest part of a lake gives valid information about processes impacting the entire lake. The deepest basins contain sediments that are focused from the entire lake surface and are considered representative of the history of the lake. Many radiocarbon-dated replicate studies have shown this to be the case. On p. 1 of our 9/00 final report concerning the study of Little Trout Lake, Inkspot Bay, and the Corn lakes, the Methods section describes in detail where and how the cores were obtained. The map of the study area is on p. 12 of the report. There is some replication of data because we had the core tops from 4 cores from the deep hole in Little Trout Lake. Dr. Roper refers to Great Corn Lake as our "non-

cranberry reference lake” but, as we stated in the last sentence of the Setting section of the report, “There are preparations being made for cranberry production adjacent to Great Corn Lake and heavy dredging was happening as we collected our sediment cores.” We had no reference lakes in this study and looked at the data from Ike Walton and Zee and to other northern Wisconsin lake research for comparisons.

Plotting heavy metals on a 0-100 scale, as suggested by Teryl Roper, makes no sense. The Y-axis needs to be scaled in increments that relate to human health risks when EPA regulations are based on ppm or ppb in drinking water or maximum contaminant levels (MCL) in fish consumption advisories. Given that Hg and As levels in Little Trout and Inkspot Bay are 7 times higher than the modern high abundances in immediately surrounding lakes, it would be in the interest of all concerned parties to find out where these elements are coming from.

The most powerful data we have to support our conclusions about degradation to Little Trout Lake and Inkspot Bay water quality and biology are the ^{210}Pb dates that document the changes within the lake and the bay as starting in the 1940's and increasing as the cranberry operations expanded. In this case, the location of the cranberry bogs in relation to the lakes and the bay makes the cranberry industry the most logical vector for change. Although residential development and industrial-agricultural expansion was happening at the same time in northern Wisconsin and confounds the picture, a close look at the chemical and biological changes in Inkspot Bay indicates a very close point source contributing to the dramatic changes. In addition, most land disturbance at this site is associated with the cranberry industry, with little or no residential development immediately on the shoreline of Little Trout Lake at the time of core collection.

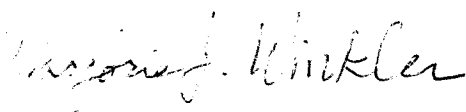
We know that in the past lead arsenate and sodium arsenate were widely used as fungicides during fruit growth, storage, and distribution. Erosion from land disturbance can add sediment loads to a lake and release through oxidation the metals that were adsorbed onto the sediment and also sequestered in the peats of bogs over time. These released elements become chemically available to the biota again. There is also concern about storage of old fertilizer/pesticide stocks or improper disposal of toxic products, the possibility of spills, uses associated with the maintenance of equipment, etc. Not every use of heavy metals is necessarily related to direct application on the cranberries.

The letter dated 1/12/2006 from R. T. Krueger of Northern Lake Services, Inc. claims that there has been no change in nutrient status and plant macrophyte species and distribution over the 15 years that they have monitored the lake. Our biological studies of the plankton in the lake (the diatoms and the cladocera) that document changes in species and abundances over the past 2000 years (core bottom samples v core top samples) document changes in species composition of both phyto- and zooplankton. These changes, indicative of sediment chemical and rate change, show that at a trophic level not obvious macroscopically, the “canary in the coal mine” may be dying. The findings indicate that since 1945 when cranberry operations began, the sediment deposition rate in Inkspot Bay has increased 10-fold and the lake has been transformed from a bog lake with highly organic sediments into an alkaline algal broth. There are indications that the

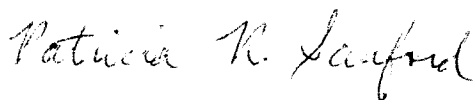
very deep and large Little Trout Lake is being impacted as well. The diatom floras in both lakes have become dominated by taxa typical of high nutrient alkaline waters, and the littoral cladoceran community has become increasingly dominated by *Chydorus brevilabris*, a taxon frequently associated with eutrophication. The timing and nature of these changes is consistent with commercial cranberry operations being the source of water-quality degradation in lakes on tribal lands. These changes may be early-warning signals of change. In the future, more resilient higher trophic levels may reach critical thresholds and abruptly change state.

It would be in the interest of all stakeholders (the Lac du Flambeau, the WI DNR, and the Cranberry Growers Association) to understand the processes that are affecting Little Trout Lake, Inkspot Bay, and Great Corn Lake. The presence of arsenic and mercury, etc. in the area under discussion should be evaluated from samples obtained from lakes, marshes, natural bogs, and cranberry bogs. We undertook the Little Trout-Inkspot Bay study as a pilot study and hoped (and do hope) that the questions raised by our research and the recommendations made will be followed by further study.

Sincerely,

A handwritten signature in cursive script, reading "Marjorie Winkler".

Dr. Marjorie Winkler, Senior Scientist

A handwritten signature in cursive script, reading "Patricia R. Sanford".

Dr. Patricia R. Sanford, Associate Scientist